Assessment for Software Development Internship at Coral Blockchain

Thank you for your interest in the role of a Software Development Intern at Development. The following set of instructions is aimed to help you understand the goals of the internship and help you prepare for the technical assessment and the follow-on technical interview for the role.

About the internship:

Coral Blockchain is a fully integrated Blockchain Development and Advisory company.

Our clients range from State and Federal government to Enterprises and startups. We are passionate about supporting blockchain innovation across verticals and geographies. We are selective about the projects we take on, working only with clients where blockchain solutions provide genuine value.

Our team represents multidisciplinary backgrounds and skill sets, from systems architecture to sales and marketing, and are alumni of world leading educational institutions and companies, including MIT, Harvard, Deloitte, Oracle, and Capital One.

Blockchain is a relatively new technology and has a lot of promise in its ability impact to society. Some predict it would be as revolutionary as the internet itself. Since the technology is very new, it provides a great learning opportunity but at the same time it is very challenging as few people have mastered it and learning resources are limited.

This internship will have a lot of ambiguity and an ability to deal with this technical ambiguity is a pre-requisite for the role. Learning agility and ability to deal with new technologies on the fly is a key requirement to succeed at Coral Blockchain.

By the end of this internship, you will get a solid understanding of blockchain technology and will have created software that uses this technology. The internship can also convert to a full-time offer for candidates that impress us and who are interested in pursuing a career at Coral Blockchain.

Objective of Technical Assessment:

The technical assessment is geared to identify candidates who will enjoy working with new technologies and figuring stuff out with minimum direction. The technical assessment will be a good indication of the level of guidance you will get during your internship.

Most times, you will be given an objective and a few resources on to get you started but how far you go will be based on your own initiative. If you get stuck, we are here to help and provide direction, but you are in the driver's seat.

What you need to do:

The technical assessment requires you to create a small REST API and a web page. We have provided you the different steps for the exercise along with resources that will be helpful for you. You are free to use any reference material, but you should be able to explain in your own words any code or

configuration that you use.

The exercise does require you to have a personal laptop and you should be able to install the necessary software on it.

Problem Statement:

1. Create a Web form which will take inputs from user. Below are the form fields.
    a. User Name
    b. Password
    c. Email Id
    d. Phone Number
    - **Note*:** Use input field validation.
2. Create a REST API which will take request from the HTML form and insert the data into MySQL database along with the current Date and Time.
3. Your API should insert the record if it doesn‘t exist, else update the previous record.
4. Create a search bar which will take email id as input and show the respective record if exist, else show error.
5. MySQL Table struct and connection details;
    a. Table Struct:
        userName varchar(25) NOT Null,
        emailId varchar(50) primary key,
        phoneNo varchar(10) Not Null,
        password varchar(50) Not Null,
        dateTime Timestamp
    b. Host Name: db-intern.ciupl0p5utwk.us-east-1.rds.amazonaws.com
    c. Port: 3306
    d. User Name: dummyUser
    e. Password: dummyUser01
    f. Db Name: db_intern
    g. Table Name: userData
    - **Note*:** You should use Node js for API creation.

You’ll be judged on the following:

1. UI/UX
2. Simplicity
3. Code Structure
4. Documentation

Deliverables:

1. Commit all of your scripts, conf or any other file on Github.
2. Create a document describing your experience. We are not looking for fancy words but we do want to get visibility into your train of thought.
    a. The steps you executed, your sources and how you went about the exercise.
    b. Your learnings.
    c. Which part did you find challenging and which part was fun?
    d. Any suggestions for us to improve the exercise.

    e. Use screen shots as and when necessary to show the results.
3. Please note that this is document is our primary way of screening you for the F2F Interview.
4. During the F2F (or Skype for those who are remote) interview, we will ask you questions to guage your understading of the topics in the technical assessment and review your code.

Bonus Task:

For those of you who find the above exercise to be easy and have some spare time.

1. Create a Bootstrap and responsive web Form.
2. Delete a record using email id if exist, else show an error.
3. Create the same REST API in GO lang.